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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CARTER, AARON W

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/718,342

Applicant(s)

LYONS ET AL.

Examiner

Aaron W Carter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 71-91, 98-100 and 151-165 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 71-91, 98-100 and 151-165 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 24 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5, 6, 9, 10, 11.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group IV, claims 71-91, 98-100 and new claims 151-165 in Paper No. 12, filed March 4, 2004 is acknowledged.

2. In view of the papers filed March 4, 2004, the inventorship in this nonprovisional application has been changed by the deletion of Alexander Ralph Lyons and Simon Michael Rowe as inventors.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of the file jacket and PTO PALM data to reflect the inventorship as corrected.

Specification

3. The disclosure is objected to because of the following informalities:

Each section is not clearly labeled, for example there is no distinction between the Background and Summary.

Appropriate correction is required.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

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5. The abstract of the disclosure is objected to because it is not within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Information Disclosure Statement

6. The information disclosure statement filed February 26, 2003, paper number 7, fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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Claims 91 and 165 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As to claim 165, the invention discloses non-functional descriptive material; please refer to the phrase on line 1 stating, "A signal conveying processor computer program instructions". A signal, per se, which is nothing more than an abstract idea, in order for the functionality of a data signal to be realized, it must be tangibly embodied on a "computer readable medium". Examiner suggests canceling claim 165. Claim 91 is rejected based on similar reasoning.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 71-75, 78-84, 87-91, 98-100 and 151-165 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,222,551 to Schneider et al. ("Schneider").

As to claim 71, Schneider discloses a method of operating an apparatus for generating model data representative of a three dimensional model of an object from input signals

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representative of a set of camera images of the object taken from a plurality of the camera images of the object:

Displaying a set of icons, each being associated with a respective one of the camera images of the object (Fig. 3A and column 5, line 64 – column 6, line 4, wherein the icons corresponds to the six views displayed);

Receiving a selection signal responsive to user actuation of an input means whereby the selection signal identifies a selected one of the icons (Fig. 3A, column 3, lines 29-33 and column 6, lines 5-11);

Determining a selected camera image from the set of camera images corresponding to the selected icon (Fig. 3A and column 5, line 64 – column 6, line 4, wherein each icon is an image);

Displaying the selected image (Fig. 3A and column 5, line 64 – column 6, line 4, wherein each icon is an image that is being displayed);

Determining position data representative of a selected camera position from which the selected image was taken (column 6, lines 5-6 and Fig. 3C);

Generating in accordance with the model a model image representative of a view of the model from a viewpoint corresponding to the position data (column 6, lines 5-6 and Fig. 3D);
and

Displaying the model image for visual comparison with the selected image by the user (column 8, lines 58-62).

As to claim 72, Schneider discloses a method as claimed in claim 71, including the step of generating the icons in response to receiving a mode selection input (Fig. 4A, element B).

As to claim 73, Schneider discloses a method as claimed in claim 71, wherein the icons are generated as thumbnail images of the respective camera images (Fig. 3A, wherein the icons on the cube are images of the model from different viewpoints each of which can be considered a thumbnail image).

As to claim 74, Schneider discloses a method as claimed in claim 74, wherein the step of displaying the set of icons comprises displaying the icons in an array and displaying links between the icons such that each pair of icons corresponding to adjacent camera positions in a position sequence of the camera positions is joined by a respective link (column 5, line 66 – column 6, line 2).

As to claim 75, Schneider discloses a method as claimed in claim 74, wherein the icons are displayed in a linear array (column 5, lines 49-53).

As to claim 78, Schneider discloses a method as claimed in claim 71, comprising generating the selection signal by operation of a pointing means for user actuation in selecting one of the displayed icons (column 3, lines 29-33).

As to claim 79, Schneider discloses a method as claimed in claim 71, wherein displaying the set of icons comprises displaying a view of the model from a viewpoint in which the icons comprises displaying a view of the model from a viewpoint in which the icons comprise

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representation of cameras and are shown at respective positions relative to the model which correspond substantially to the camera positions relative to the object (Figs. 3A, 3B and column 5, line 66 – column 6, line 2).

As to claims 80, 89, 90, 91, 98, 99, 151, 157 and 163-165, please refer to rejections made for claim 71 above.

As to claim 81, please refer to rejections made for claim 72 above.

As to claim 82, please refer to rejections made for claim 73 above.

As to claim 83, please refer to rejections made for claim 74 above.

As to claim 84, please refer to rejections made for claim 75 above.

As to claim 87, please refer to rejections made for claim 78 above.

As to claim 88, please refer to rejections made for claim 79 above.

As to claim 152, Schneider discloses a method as claimed in claim 151, wherein the step of rendering the three dimensional computer model data comprises rendering the three dimensional computer model data using texture data to generate image data showing a virtual image of the three dimensional computer model rendered with texture data (column 3, line 60 – column 4, line 3).

As to claim 153, Schneider discloses a method as claimed in claim 151, wherein:

Data defining the field of view and magnification for each respective camera image is stored (column 3, lines 50-55 and column 5, lines 22-27),

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Data defining the field of view and magnification of the identified camera images is read (column 3, lines 55-62 and column 5, lines 22-27), and

The step of rendering the three dimensional computer model data comprises rendering the three dimensional computer model data in accordance with the viewpoint, field of view and magnification of the identified camera image to generate virtual image data showing a view of the three dimensional computer model that is substantially the same as the view of the object in the identified camera image (column 3, line 50 – column 4, line 3 and column 5, lines 18-33).

As to claim 154, Schneider discloses a method as claimed in claim 151, wherein the step of displaying the icons comprises displaying a representation of the model and displaying each icon at a respective position relative to the representation of the model which corresponds substantially to the position from which the camera image associated with the icon was recorded relative to the object (column 8, lines 58-62, column 5, line 64 – column 6, line 4, Fig. 3A and 3B).

As to claim 155, Schneider discloses a method as claimed in claim 154, wherein each icon is displayed together with a representation of the viewing direction from which the associated camera image was recorded (column , line 64 – column 6, line 4).

As to claim 156, Schneider discloses a method as claimed in claim 154, wherein each icon is displayed as a representation of a camera (Fig. 3A, wherein each viewpoint image on the cube corresponds to an icon and represents the camera in way of view).

As to claim 158, please refer to rejections made for claim 152.

As to claim 159, please refer to rejections made for claim 153.

As to claim 160, please refer to rejections made for claim 154.

As to claim 161, please refer to rejections made for claim 155.

As to claim 162, please refer to rejections made for claim 156.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 76, 77, 85 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider.

As to claim 76, Schneider discloses a method as claimed in claim 71, wherein the selected camera image and the model image are displayed in respective windows (column 8, lines 58-62). Schneider neglects to explicitly disclose a further step of providing relative movement of the windows in response to receiving window movement input signals. The Examiner takes Official Notice that the movement of windows is well known to those in the art as attribute of almost any computer operating system. It would have been obvious to one of ordinary skill in the art to employ the selected image and model image windows of Schneider

with the ability to be moved around within a display, because this provides the invention with rapid manipulation of the display.

As to claims 77, 85 and 86, please refer to the rejection made for claim 76 above.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 6,346,938 to Chan et al. discloses selecting the viewpoint of a 3D model.

USPN 5,956,031 to Berteig et al. discloses selecting the viewpoint of a 3D model.

USPN 6,421,050 to Ruml et al. discloses selecting the viewpoint of a 3D model.

USPN 6,686,918 to Cajolet et al. discloses selecting the viewpoint of a 3D model.

USPN 5,623,583 to Nishino discloses selecting the viewpoint of a 3D model.

USPN 6,525,731 to Suits et al. discloses selecting the viewpoint of a 3D model.

USPN 5,864,343 to Naughton et al. discloses selecting the viewpoint of a 3D model.

USPN 5,680,562 to Conrad et al. discloses selecting the viewpoint of a 3D model.

USPN 6,224,214 to Martin et al. discloses selecting the viewpoint of a 3D model.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W Carter whose telephone number is (703) 306-4060. The examiner can normally be reached on 7am - 3:30 am (Mon. - Fri.).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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